REMARKS

Claims 1-37 are pending in this application. Claims 5, 12-17, and 22-31 are withdrawn from consideration, Claims 1-4, 6-11, 18-21, and 32-37 have been examined. Claims 1, 2, 4, 6-9, 18-21, 32, and 34-37 stand rejected. Claims 1 and 32 have been amended. Reconsideration and allowance of Claims 1-4, 6-11, 18-21, and 32-37 is respectfully requested.

Interview Summary

Applicant regrets the misunderstanding regarding the substance of the interview summary, as reflected in the difference between the interview summary provided by the Examiner and the interview summary filed by applicant on July 12, 2004.

Abstract

The Examiner has objected to the abstract because it exceeds 150 words. A shortened abstract is provided on a separate sheet of paper, as requested by the Examiner. Withdrawal of this ground of objection is respectfully requested.

The Rejection of Claims Under 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected Claims 1-4, 6-11, 18-21, and 32-37 under 35 U.S.C. § 112, second paragraph, as being indefinite. According to the Examiner, the preamble of Claims 1 and 32 is indefinite on the basis that it has a different goal than the actual claim steps. The preamble of Claims 1 and 32, from which Claims 2-4, 6-11, 18-21, and 33-37 depend, have been amended to recite "A method for identifying analytes that induce a third expression profile that is more similar to a first expression profile than is a second expression profile," as is stated in step (d) of Claims 1 and 32. Withdrawal of this ground of rejection is respectfully requested.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

The Rejection of Claims Under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 1, 2, 4, 6-9, 18-21, 32, and 34-37 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,368,794 (Daniel et al.). Applicants respectfully disagree for the reasons elaborated below.

There are three requirements for establishing a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Third, the prior art reference must teach or suggest all the claim limitations. As recently emphasized by the Federal Circuit, "the suggestion to combine references must not be derived by hindsight from knowledge of the invention itself." *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 02-1532, -1559 (Fed. Cir. Aug. 31, 2004). The Federal Circuit has also stated that "[i]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 230 U.S.P.Q. 416, 419 (Fed. Cir. 1986) (citing *In re Wesslau*, 147 U.S.P.Q. 391, 393 (C.C.P.A. 1965)); *In re Hedges*, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986) (same). In addition, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. M.P.E.P. § 706.02(j). For the reasons below, applicants respectfully submit that the burden of establishing a *prima facie* case of obviousness has not been met.

According to the Examiner, Daniel et al. contains a description of step (c) of the claimed method in general terms and a suggestion that is specifically directed to the practice of step (c). To support this position, the Examiner points to Column 10, line 5, to Column 11, line 7, of

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Daniel et al. as describing step (c) of the claimed method in view of the treatment described in Column 2, line 65, to Column 3, line 6. Applicants respectfully disagree with the Examiner's characterization of Daniel et al.

First, although Daniel et al. discloses both methods of treatment with the disclosed polynucleotides or polypeptides (e.g., Column 2, line 65, to Column 3, line 6) and methods for evaluation of therapies for diseases associated with cell proliferation (e.g., Column 10, line 5, to Column 11, line 7), Daniel et al. does not disclose or suggest methods for evaluating the efficacy of *treatments with the disclosed polynucleotides or polypeptides*. To the contrary, Daniel et al. clearly distinguishes between "treatment" and "evaluation of therapies associated with cell proliferation" as separate and distinct aspects of the disclosure. Specifically, Daniel et al. separates the description of the use of the disclosed sequences for diagnosis, monitoring the efficacy of therapeutic treatment regimes, and diagnosis by detecting hybridization complexes between the disclosed polynucleotide sequences and sample polynucleotides (e.g., Daniel et al., Column 10, line 7, to Column 11, line 57), from the description of the use of these sequences for the treatment of diseases (e.g., Daniel et al., Column 11, line 69 to Column 14, line 15). Daniel et al. neither discloses nor suggests using the disclosed nucleotide sequences simultaneously for treatment and for evaluating or monitoring the efficacy of that treatment. Applicants respectfully submit the Examiner is impermissibly picking and choosing only so much of Daniel et al. that might support the Examiner's position and that one of skill in the art reading the whole of Daniel et al. would appreciate that the use of the polynucleotides of Daniel et al. for treatment and the use of these nucleotides to monitor the efficacy of therapies are distinct and unrelated applications. Applicants further submit, respectfully, that only impermissible hindsight based on applicant's own invention would provide any suggestion or motivation to use the disclosed

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

nucleotide sequences in Daniel et al. simultaneously for treatment and for evaluating or monitoring the efficacy of that treatment.

Second, even if the same polynucleotides of Daniel et al. were used both for treatment and for monitoring the efficacy of that treatment, Daniel et al. does not disclose or suggest the claimed invention because Daniel et al. neither discloses nor suggests treating a sample with "at least one analyte of previously uncharacterized specific pharmacological activity," as recited in step (c), or identifying one or more such analytes, as recited in step (d) of the claimed methods. According to the Examiner, the differentially expressed genes in cancerous or precancerous tissues in Daniel et al. are uncharacterized with respect to their specific pharmacological activity. Applicants respectfully disagree.

"Pharmacology" is defined as "the properties and reactions of drugs especially with relation to their therapeutic value" (*Webster's Third New International Dictionary* (1961)). "Therapeutic" is defined as "relating to the treatment of disease or disorders by remedial agents or methods" (*Webster's Third New International Dictionary* (1961)). Thus, an analyte of previously uncharacterized specific pharmacological activity is an analyte that has no known therapeutic value. Conversely, the treatment of a disease, i.e., a therapeutic treatment, is not a treatment of a sample with an analyte of previously uncharacterized pharmacological activity.

Daniel et al. explicitly disclose that the differentially expressed genes in cancerous or precancerous tissues are useful for the treatment of cancer, i.e., as therapeutic agents (Daniel et al., Column 1, lines 37-38; Column 11, line 59, to Column 14, line 15). In fact, the differential expression of these sequences is precisely the parameter by which the therapeutic value (i.e., pharmacological activity) of these sequences is defined.

Moreover, the only treatments disclosed or suggested in Daniel et al. are therapeutic treatments. For example, Daniel et al. describes that the disclosed polynucleotides "may be used

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

for therapeutic purposes" (Daniel et al., Column 11, lines 62-65; see also Column 13, line 61, to Column 14, line 15, describing the determination of a "therapeutically effective dose" and application of the "therapeutic methods" to "any subject in need of such therapy"). Similarly, Daniel et al. describes using assays "to evaluate the efficacy of a particular therapeutic treatment regimen in animal studies, in clinical trials, or to monitor the treatment of an individual patient" (Column 10, lines 64-67). Therefore, Daniel et al. neither discloses nor suggests a treatment with an analyte of previously uncharacterized specific pharmacological activity, as recited in step (c) of the claimed invention.

Furthermore, *monitoring or evaluating* the efficacy of a therapeutic treatment is clearly different than *identifying* an analyte with a previously unknown therapeutic value. Therefore, Daniel et al. neither discloses nor suggests identifying an analyte of previously uncharacterized specific pharmacological activity, as recited in step (d) of the claimed invention.

For all the reasons above, applicant submits that Daniel et al. does not suggest or provide any motivation to arrive at the claimed invention and respectfully requests withdrawal of this ground of rejection.

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

CONCLUSION

In view of the foregoing amendments and remarks, Claims 1-4, 6-11, 18-21, and 32-37 are believed to be in condition for allowance. If any issues remain that can be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicant's attorney at 206.695.1783.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS[PLLC]

Karen Blöchlinger, Ph.D.
Registration No. 41,395
Direct Dial No. 206.695.1783

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

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KBB:cj

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS[PLLC]
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100